TCS. 10387/64 G-MB - 875/64 18 November 1964 Copy No.

MEMORANDUM FOR: Chief, Resources Division, ORR

ATTENTION: Agriculture Branch 25X1A

THRU : Chief, RG/RB/CGS

FROM : Chief, CIA/PID

SUBJECT : China Flood Damage

REFERENCE: Requirement No. C-RR4-18,940 (Project No. C 1687-64)

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1. In partial fulfillment of Requirement No. C-RR4-81,940 (C 1687-64), a preliminary analysis has been made of KH photography taken on for the purpose of delineating the area affected by flooding and soil saturation in the lowland plain south and southeast of Pei-ping, China.

2. In view of the urgency of a preliminary report, mapping of the hydrology has been done on the basis of the analyst's reaction to the landscape where the scale of good photography averages slightly less than 1:300,000. The areas of extensive water coverage are readily seen, and more or less obvious are those where numerous small water bodies and dark soil patches interrupt an apparently water-logged surface. All of these have been mapped together as "flooded and water-logged". In addition to these, as the study has progressed, other apparent indicators of hydrologic conditions elswhere on the plain have been recognized. It is not felt that these can be fully evaluated before the first report must be made, and, therefore, additional categories have been included in plotting the general aspect of the remainder of the plain, with the expectation that they may be useful to R/Ag analysts. In many locations there is evidence of damage from streaming floodwaters such as would result from cloudburst, the breaking of flooded streams from usual stream channels, and the flow of great volumes of water over an essentially plane surface where no channels exist. These have been combined as areas displaying "evident current action". In addition, distinctly different cropland aspects have been noted. First, there is the distinct normal field pattern common to normal crop conditions which have been mapped as areas of "normal crop patterns". Second, over large areas it appears that crops were planted in 1964 but that they have been damaged by heavy rains, either as a consequence of the physical force of the rain itself or as a result of being on land that became saturated by floodwaters between the time of significant growth and the date of photography. The areas covered by these crops have been mapped under the currently "flooded or waterlogged" or the /"evident current action"/category to fit their situations.

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It is not known presently whether the 1964 crop conditions can be evaluated any more specifically. Finally, there are several areas which appear to have very poor vegetal tone and field patterns. It is possible that these may have remained water-logged after the floods of 1963 and not planted to crops in 1964, or that they may have been planted in the spring of 1964 but suffered early flood damage and will produce little, if any, harvest in 1964. These areas have been mapped as "poor crop patterns". Thus, four significant categories of areal differences are mapped as: (1) flooded or water-logged, (2) evident current action, (3) normal crop patterns, and (4) poor crop patterns. Items 3 and 4 are subordinated to 1 and 2. In the division of these categories, it must be remembered that the initial scan of impressions which may be refined or altered when time permits study of other photographic coverage.

3. Mapping of the various categories has been done on overlays to maps of a scale of 1:200,000. Transfer of the information was then made to overlay of AMS Sheet NJ 50 (Series 1301) of a 1:1,000,000 scale. In conference with the requester it was agreed that the larger scale materials would be retained by the analyst for comparative study in fulfilling the remainder of the requirement. An overlay of the smaller scale will be forwarded to the requester when it has been reproduced by PID Graphics Shop.

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4. The photo analysis on this project is being performed by CIA/PID/GMB, who may be contacted on ext. 2548 for any additional information.

5. This memo is in partial response to referenced requirement.

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